

DISCUSSION OF THE CLAIMS

Claims 1-6, 8-9, 12, 14-19, 21-28, 32-37, and 39-51 are pending in the present application. Claims 7, 10, 13, 20, 29-31 are canceled claims. Independent Claim 1 is amended to include features from previously presented Claim 11.

No new matter is added.

REMARKS/ARGUMENTS

The catalytic composition of Claim 1 now includes a zeolite Y having an $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio of from 10 to 20.

Claim 1 includes features from previously presented Claim 11 which the Office asserted was obvious over Girotti (EP 0847802) in combination with Grootjans (U.S. 5,750,814) and Ward (U.S. 4,185,040). The Office concedes that the primary reference, Girotti, does not describe a catalyst having a $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio in a range of 10-20. The Office asserts that those of skill in the art would nonetheless have considered such a molar ratio range obvious in view of Ward's alleged disclosure of zeolites having a $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio of 2-80.

Applicants draw the Office's attention to the Declaration submitted concurrently herewith under 37 C.F.R. §1.132. The Declaration compares the performance characteristics of a catalytic composition meeting the requirements of the present claims with catalytic compositions that have a $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio that is outside the 10-20 range presently claimed, i.e., $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratios of 30 and 5.2. The inventive catalyst composition provides substantially improved polyethylbenzenes conversion and improved lifetime in comparison with the comparative catalytic compositions that do not meet the $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio range of the present claims. The inventive and comparative examples are tabulated below for easy comparison.

	Zeolite Y SiO₂/Al₂O₃		Productivity (g EB/g ctz) 24	Productivity (g EB/g ctz) 145
Catalyst example 2	12	Polyethylbenzenes conversion %	80.1	78.9
CAT A	30	Polyethylbenzenes conversion %	70.1	69.3
CAT B	5.2	Polyethylbenzenes conversion %	80.4	72.1

Based on the inventive and comparative examples the Declarant declares:

Nothing in the Grootjans, Ward or Girotti references suggests that improved productivity and catalyst lifetime can be obtained by using a zeolite Y having a $\text{SiO}_2/\text{Al}_2\text{O}_3$ molar ratio of 10-20 in the manner recited in the present claims.

See paragraph no. 10 of the Declaration.

The Declaration also compares the performance characteristics of a catalytic composition meeting the requirements of the present claims with catalytic compositions in which at least 30% of the pore volume does not consist of pores with a diameter greater than 100 nanometers. The inventive catalyst composition provides substantially improved polyethylbenzenes conversion in comparison with the comparative catalytic compositions that does not have at least 30% of the pore volume consisting of pores with a diameter greater than 100 nanometers. The inventive and comparative examples are tabulated below for easy comparison.

	Volume of pores with a diameter greater than 100 nm	Polyethylbenzenes conversion % (hours on stream)	
CAT A-II	28%	92.6% (45)	92.3% (93)
CAT B-II	34%	22.6% (24)	19.2% (119)

Based on the inventive and comparative examples the Declarant declares:

Nothing in the Grootjans, Ward or Girotti references suggests that improved productivity and catalyst lifetime can be obtained by using a zeolite Y having a pore volume fraction of greater than 30% having a diameter of 100 nm.

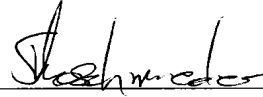
See paragraph no. 23 of the Declaration.

Applicants submit that the Declaration includes factual evidence with respect to both the ratio and the pore volume characteristics of the catalytic composition which rebuts the Office's assertion of obviousness.

Applicants thus respectfully request withdrawal of the rejection and the allowance of all now-pending claims.

Respectfully submitted,

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